

System Configuration Team (SCT)
Reasonable & Prudent Measure #26
Meeting Notes
March 10, 1997

Greetings and Introductions.

The March 10 meeting of the System Configuration Team, held at the National Marine Fisheries Service's offices in Portland, Oregon, was co-chaired by Jim Ruff of the Northwest Power Planning Council staff and Bill Hevlin of NMFS. The agenda for the March 10 meeting and a list of attendees is attached as Enclosures A and B. The following is a distillation (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items. Please note that some enclosures referenced may be too lengthy to routinely include with the meeting notes; copies of all enclosures referred to in the minutes are available upon request from Kathy Ceballos of NMFS at 503/230-5420.

COE's Witt Anderson explained that several of the visitors present at today's meeting, including Dave DesVoigne, Wally Hickerson and Doug Pearman, are the contractors who will be conducting the independent review, called for in the language of the FY'97 Congressional appropriation, of the Corps' fish passage implementation process. The contractors are now beginning their work, which will consist initially of interviews with the agencies and tribes involved in the implementation of fish passage measures, Anderson explained.

In a nutshell, explained Pearman, our task is to evaluate the process under which structural improvements at the fish passage facilities are identified, designed, contracted for and implemented. In other words, we'll be looking at the design and construction side of things, rather than the system operations and flow augmentation part of the equation. Our task is to evaluate how the process currently works and to recommend improvements that will make the process more efficient, from both a time and a budgetary standpoint, he explained. Our approach will be to interview the people involved in the process, to get a feel for what works and what doesn't.

In terms of the timeline for the completion of this work, Pearman continued, we owe a draft report to our customer by May 1. That gives us March and April to conduct the interviews and make our initial recommendations -- that isn't a lot of time. I would appreciate your willingness, when you get a call from SAIC or HDR Engineering, to make the right people available for us to talk to.

Moving on, Anderson distributed a series of handouts, requested at the last SCT meeting, detailing the Corps' Fish Passage O&M expenditures. I'm not sure there is any need for discussion of these documents today, he said, but they are available for anyone who wants to review them -- Enclosures D ("COE-NPD Fish and Wildlife Budget Operation and Maintenance Costs FY'97"), E ("North Pacific Division Justification of Estimate, O&M, General FY'98") and F

("Budget Distribution Report by Feature Cost Code, O&M, General, FY'98 Division Recommended Budget").

Anderson also distributed Enclosure C, a letter from Assistant Secretary of the Army H. Martin Lancaster to the Hon. Pete V. Domenici, Chairman of the Subcommittee on Energy and Water Development, Dated February 25, 1997, describing the Corps' intent to evaluate drawdown of John Day Reservoir as a salmon recovery measure. Most of you have heard about this letter; it has been sent to the Subcommittees on Energy and Water Development on both the House and Senate side, and is currently under discussion there, Anderson said. This is the letter that requests

reprogramming, and identifies the anticipated budget amount for next year. Any guesses on when

they might take action on this? asked Ruff. My guess is by the end of March, Jim, but I wouldn't put my paycheck on it, Anderson replied.

While we're on the subject, I should mention that the Power Planning Council has an item on the agenda for its work session this Wednesday dealing with drawdown in general, and including John

Day, said Ruff. They will be discussing what we know and what we don't know, in terms of the information about John Day, and will be discussing whether or not to send a letter to Congress about the need to collect more information on John Day drawdown. In other words, there is the possibility that the Council will provide some additional regional support for further evaluation of

John Day drawdown -- we'll know after Wednesday, Ruff said.

Returning to his O&M budget information (Enclosures D, E and F), Anderson explained that this information had provided in response to a discussion, at the last SCT meeting, of what the Fish Passage O&M Subcommittee would be doing to support the SCT's assignment from the Implementation Team to "oversee" the fish and wildlife hydro O&M share identified under the Memorandum of Agreement. There was a request for additional information on the Corps' overall O&M budget, said Anderson, and that's what I've attempted to provide today.

The details of this budget will be worked at the FPOM subcommittee, Anderson said. FPOM has agreed to provide a briefing to the SCT on the O&M budget, and I think we should put that briefing on the agenda for the April SCT meeting. In the meantime, we have these handouts, detailing the budgets as we currently see them.

Anderson spent a few minutes discussing the various meetings that have occurred to date in the MOA arena, and how Enclosures D, E and F fit into that process. He asked that the SCT membership review his handouts in preparation for the FPOM briefing at the April SCT meeting; it was so agreed.

I. Proposed Plan for Lower Granite Surface Collection Tests in FY'98.

This is an important issue from the SCT's perspective, because we need to bring some resolution on this topic to the April 3 Implementation Team meeting, Hevlin said. At the February 4 FFDRWG meeting in Walla Walla, this topic was discussed in depth and in detail,

said

Anderson. The main discussion centered on Walla Walla District's 1998 proposals, which include a simulated Wells intake and a guidance device. At FFDRWG, there was agreement that agencies would be invited down to the Waterways Experiment Station (WES) to observe the modeling work there.

That field trip to WES took place last week, said Anderson. We would like to provide the SCT with a status report on that activity, as well as some information about how that technical data will continue to be worked at the FFDRWG meeting in the first week in April.

Dan Kenney of COE's Walla Walla District provided an update on the current status of this project. He distributed Enclosures G (a memo entitled "Surface Bypass Collection, Model Demonstrations at Waterways Experiment Station, Trip Report" dated March 9, 1997) and H (a spreadsheet detailing the "1998 Lower Granite Surface Bypass Collection Program Behavioral Guidance Structure/Simulated Wells Intake Schedule"), and went through them at some length (see Enclosures G and H for details).

We just returned from WES last week, and these handouts are a brief summary of what happened, from the Corps' perspective only, Kenney explained. It was a very worthwhile effort from our perspective, he said, because it provided an opportunity to engage a variety of agencies in the region in the type of focused technical discussion that is difficult to have in a larger meeting.

Kenney spent some minutes describing the various configurations tested during the WES trip (again, see enclosures for details). I believe we were able to come to agreement on what gate configurations we should run in the 1997 spring test -- an Ice Harbor, or high-velocity version, with the top two of the six gates open on all three slots; the second configuration is a maximum area configuration, with all three slots open to their maximum extent. The third agreed-to configuration has all three slots half-open from top to bottom, so that the water velocity through the slots is only about 3 f.p.s. Between these three configurations, plus the S.B.C. off configuration, we feel that this will provide enough disparate conditions to make some distinctions among their results.

Kenney moved on to the proposed test configurations for 1998 (see Enclosure G for details). In general, he said, while, from a technical standpoint, the response from the participants was favorable, there were questions about such issues as whether or not the proposed biological monitoring will provide adequate data, and whether the particular structure we propose to test is adequate from this standpoint. There were also questions about the behavioral guidance structure

(BGS) we're proposing to use, said Kenney; the BGS we modeled at WES last week was considerably different from what was proposed for Ice Harbor in 1996. In general, there was agreement that there was some technical merit to this proposal, which was intended to alleviate some of the concerns (scalping etc.) about last year's Ice Harbor structure, Kenney said. However, there are still some concerns, especially in the monitoring arena, that need to be addressed.

I would suggest that we need a focused SCT discussion on the Lower Granite fish guidance curtain before we get too far down this track, from a funding standpoint, said Ron Boyce of ODFW. Fair point, Anderson replied -- perhaps FFDRWG needs to wrestle this to the ground at their early April meeting, and bring the outcome of that discussion to the April SCT meeting.

The critical milestone is award of this contract, which is scheduled to take place in July. But based on past history, we would prefer to avoid last-minute surprises. If there are serious concerns about this project, we would like to know about them well before we come down to the wire on the contract award, Anderson said.

After some minutes of further discussion, the SCT agreed that many of the technical concerns associated with this issue will be addressed at the next FFDRWG meeting, scheduled for April 1. Any issues or technical details that cannot be resolved at that meeting will be summarized in written form and distributed to Hevlin and Ruff prior to the SCT's April 21 meeting. Any issues that cannot be resolved at the April SCT meeting will be framed for discussion at the May IT meeting.

One other item of technical information, said Woodin -- what range of alternatives was looked at,

as far as the location of the Simulated Wells Intake and the curtain during last week's WES trip? The SWI was located in front of Unit 3 on the physical model, Kenney replied. The curtain was also attached at Unit 3. We did discuss putting it at other locations; however, we physically modeled only the Unit 3 location. The possibility of multiple SWIs was also discussed. The suggestion of locating the curtain in front of the spillway was not addressed during the WES trip?

asked Woodin. That's correct, was the reply -- we are aware of that suggestion, made at the last SCT meeting; the Corps has identified some technical concerns about that particular location, but it didn't come up during the WES trip.

One other thing to be aware of, said Kenney -- the award date for construction of both of these structures is September 30, 1997 -- of course, plans and specs need to be backed up from that date.

Steve Rainey and Chris Toole of NMFS and Keith Kutchins of the Shoshone-Bannock Tribes provided a few further technical comments on the guidance curtain design and test configuration; ultimately, Ruff summarized the outcome of this discussion by saying that technical comments will

be provided at the April FFDRWG meeting; participants are asked to review the technical report from the WES trip prior to the FFDRWG meeting; if necessary, the FY'98 Lower Granite surface collection test will be discussed further at the April 21 SCT meeting.

II. Discussion of Work Plan and Progress on FY'98 Issues for IT Consideration.

The SCT's discussion of these three issues occupied the next three hours of the meeting, resulting in a number of individual work assignments in preparation for the March 24 and April 3 Implementation Team meetings. The following is a brief summary of that discussion, capturing

major comments and work assignments, together with the ultimate framing of each issue for the IT by SCT co-chairs Jim Ruff and Bill Hevlin.

a) Completion, Maintenance and Improvements to Intake Screen Bypass Systems at the Lower Snake River and McNary Dams.

Hevlin distributed Enclosures I and J, a lengthy packet of information entitled "Draft Screen Bypasses Issue, Lower Snake and McNary," and "Draft Summary of the Major Issues Identified by the SCT in the COE's FY'98 Budget, Prepared for the Implementation Team, February 4 1997," respectively.

As you'll recall from the last SCT meeting, in the course of our ranking process for FY'98, the majority of the SCT membership agreed that, given the relatively small amount of money involved

(\$4.1 million), we should go ahead and complete these projects, Hevlin said. However, CRITFC and the Sho-Ban Tribes disagreed, and recommended no further funding for these projects.

There

is also an additional \$7 million which the Corps is requesting for other projects related to the screen bypass system -- new projects in FY'98.

We need to develop a packet for IT that includes a brief summary of the issue, the background information provided by the Corps, and the minority opinion -- the other side of the issue -- provided by CRITFC, said Ruff. However, our first objective is to try to resolve the issue within the SCT, added Hevlin.

The meeting participants spent a few minutes going through the information contained in Enclosure I. One comment, said Steve Pettit of IDFG -- Idaho supports spending this \$4.1 million and completing these screen bypass systems. However, based on what we're running into

this year with these new extended-length screen systems giving us increased collection capability,

it's making spread-the-risk extremely problematic, unless NMFS moves away from a strict interpretation of the Bi-Op -- you can't spread the risk if you collect 90% of the fish and transport everything you collect. And that's an operational issue that will be worked through the IT and EC, said Ruff.

One area the tribes would like to see fleshed out a little more is the safety issue, said Heinith -- one of the Corps' reasons for wanting to finish out this work, at least at Ice Harbor, is safety for the personnel at the dams. We certainly don't want to see anyone get hurt, but at the same time, we would like a bit more information about what safety factors we're talking about here.

[NOTE: although not provided at this meeting, the Corps subsequently identified the following safety-related items at Ice Harbor:

- Install bollards to protect against potential damage to separator and fish flume when vehicles turn around and also eliminate the possibility that vehicles could drive beyond the end of the road and down the hill.

- Provide sprinklers at outfall pipe discharge point to discourage seagull predation. In conjunction with that work will be a provision for safe access to the end of the pipe to

maintain sprinklers and submersible pump. Also, a navigation light will be installed on the outfall pipe.

- Modifications of the existing gate repair pit to maintain and repair both the gates and the fish screens will require the installation of safety hand rails.
- Install south side tailrace fencing to prevent fisherment from walking out on pipe to fish.
- Electrical conduit and wiring feeding the main power supply panel in the collection channel interferes with the crane operation. Modifications required for safe operation of the crane.
- Provide safe access to maintain the weir gate operator and gate shaft system. This will require the construction of a catwalk below the existing grating along the full length of the weir gate system to maintain the operator, shafts and couplings.]

In response to a question, Hevlin said that, based on the discussions at the last SCT meeting, his understanding was that this alternative -- to go ahead and spend the \$4.1 million to finish the screen bypass systems at the five dams -- was endorsed by NMFS, NPPC, COE, Oregon, Washington, Idaho and USFWS. I need to check that with our policy people -- I'll get back to you, said Marv Yoshinaka of USFWS. I would also like to look at this proposal in more detail, and get back to you before it is characterized as an endorsement from Oregon, Boyce said.

I'm also hearing that the tribes still have a problem with spending this money, said Ruff. At least until we get some more explicit, detailed information, replied Heinith. Was there any other information, besides the safety stuff at Ice Harbor, that you need to make a decision? asked Anderson. Heinith raised no other specific items at this time.

The SCT spent some minutes discussing the chronic debris problems at McNary, Granite and Goose. Anderson agreed to draft a paragraph explaining this issue, to be included under "Other Issues" in the packet distributed to the IT. The following paragraph, drafted after this meeting, was the result:

b) Risk and Uncertainty Associated with ESBSs at Lower Granite, Little Goose and McNary Dams. Large volumes of floating and submersible debris, which typically occur during high flows, can create serious problems at all projects. The problems are generally most severe at McNary and occur to a lesser extent at Granite and Goose, all of which have a full complement of extended screens. This problem can have significant impacts on the operational reliability of the screen system. Walla Walla District is investigating both short-term and long-term actions that can be implemented to mitigate the effects of debris. Potential long-term solutions include, among other possibilities, the installation of a permanent trash shear boom at one or more projects, modifications of VBSs, or installation of automated cleaning systems. Depending on results, these investigations could result in additional costs in FY'98 and FY'99.

COE is also investigating solutions to some screen performance and manufacturing deficiencies. Some of these are related to ongoing contracts in which the contractor may have an additional obligation. The outcome of these investigations could also result in additional costs in FY'98 and FY'99.

So what have the tribes proposed as an alternative to spending this \$4.1 million as the Corps

proposes? asked Boyce. I'll work something up, Heinith replied. By when? asked Ruff. I need to

see the Corps' more detailed safety issue information first, Heinith replied [NOTE: again, the above-detailed safety information was not provided at this meeting -- it was developed for the package sent to the IT, but was not available during the March 10 SCT meeting].

Do the safety items at Ice Harbor make or break CRITFC's position on the overall issue of whether or not to spend the \$4.1 million to complete these projects? asked Anderson. No, Heinith replied. However, there are probably pieces within the \$4.1 million that CRITFC will not

support. I'll commit to getting an Intertribe response to this issue back to SCT by March 24, Heinith said.

Boyce requested some additional language in the IT issue framing paper regarding the deck screen modifications at Lower Granite and Little Goose Dams. Ultimately (in the document submitted to the IT), this included the following under the "Supplemental Information" section:

Deck Screen Modifications at Lower Granite and Little Goose Dams

The redesign of the VBSs for Little Goose and Lower Granite Dams' ESBS installation was completed in 1995. As part of that original fabrication design, a system to safely install and remove screens was also developed. This method required that the VBSs be installed and removed in the vertical position to facilitate ease of removal and provide a higher degree of safety in the operation. This design would have required that a significant amount of concrete be removed and new upper guide sections be installed in each slot of the dam. The work requirement was determined to be too expensive and very time consuming due to the large amount of concrete removal. The district opted to delete that requirement from the contract and to issue a separate contract at a later date to perform these deck modifications. In the interim, the VBSs were installed and removed using temporary methods.

The district then initiated a Value Engineering Study to look at alternative ways to safely and efficiently install and maintain VBSs at these dams without using the very costly original concrete removal scheme. The VE team determined that installation and removal of the VBSs could be accomplished without the costly rework of the slots and without compromising safety. The team recommended that the following actions be taken:

- Develop a new lifting beam for removing the VBS panel underwater
- Modify the top VBS panels and top section of the VBS guides
- Install a new closure device, for ease of removal.

These actions, if successful, will preclude the need to remove concrete and would not require dewatering of the unit. Project safety would be improved because workers would not be working under suspended loads.

It was agreed that any SCT comments on the recommendation that the \$4.1 million be approved for FY'98 should be submitted to Ruff by March 14. It was further agreed that CRITFC's

counterproposal would be treated as a separate issue; once it is completed, there will be an opportunity for other SCT members to comment.

Ultimately (after the conclusion of this meeting), Ruff and Hevlin framed this issue for the IT as follows:

[This] issue is in regard to \$4.1 million in the Corps' FY'98 budget that will improve and complete the turbine intake screen bypass systems at the four Lower Snake River and McNary Dams. Through FY'97, \$115.5 million has been invested in these systems, which are 95% or more near completion.

and

A majority of SCT members support the completion, improvements to, and maintenance of turbine intake screen bypass systems at the four Lower Snake River and McNary Dams. A minority within the SCT does not support further spending on intake screen bypass systems and related improvements at these projects. The total estimated cost for completing work on these juvenile fish bypass facilities in FY'98 is less than \$4.1 million. These bypass improvements are called for in both the NMFS 1995 Biological Opinion and the Council's 1994 Fish and Wildlife Program.

Attached for your review and consideration is the SCT majority opinion information related to completion of turbine intake screen bypass improvements at the four Lower Snake River and McNary Dams: 1) a summary schedule of all turbine intake screen bypass system work from FY'92 through FY'98 at these five dams; 2) a summary of bypass work completed to date and funds expended through FY'97; 3) a summary of bypass improvement work scheduled and estimated costs for FY'98, which will complete work on these juvenile fish passage facilities; 4) biological considerations if the scheduled bypass work is not completed in FY'98; 5) a section on other related issues and 6) supplemental background information on the issue provided by NMFS and the Corps of Engineers.

Unavailable at this time is related information, rationale and recommendations for spending all, part or none of the \$4.1 million on other projects in FY'98 [This information to be provided by the SCT minority opinion by March 31].

[Information items 1 through 6 in the above list are contained in Enclosure I, available upon request from Kathy Ceballos of NMFS at 503/230-5420]

b) John Day Extended-Length Screen Implementation.

The last issue was a no-brainer, said Hevlin -- now let's get into something that might actually be a little controversial.

One informational item, to begin, Hevlin said -- according to John Williams, the numbers under "Increased FGE -- Spring: 72% to 84%" are incorrect -- they should actually read 55% to 60% FGE. Various SCT participants raised concerns about this reduced FGE estimate; John Ferguson

of COE's Portland District spent a few minutes explaining the basis for the reduction.

COE's Stuart Stanger briefed the SCT on some of the upcoming decision points associated with this activity. When I last spoke to you several months ago, the decision was whether or not Portland District should move out on plans and specifications, he said. When the decision was made to go forward with plans and specs, we knew that we would be facing this decision -- whether or not to implement John Day ESBS -- later this year. In order to implement this project,

the Corps will need to advertise the contract for construction and implementation by June 10, 1997. Another investment that will need to be made sooner -- in May -- is modifications to the crane at that project, so that it can handle the longer screens. That's not a huge dollar amount, but it is something we do not need to do if the decision is made not to go forward with this project, Stanger said.

Stanger walked the SCT through the schedule for the John Day ESBS installation (see Enclosure I for details). One bottom-line item, from the Corps' perspective, he said -- given what we know today, we believe that the region will get at least 10 years of benefit from these screens before deep drawdown could be implemented. If the schedule moves forward as laid out here, the John Day screens will be fully installed and operational by March 2000. Some screens would be installed sooner, however; the screens will begin providing some benefit as soon as the 1998 migration season. In response to a question from Heinith, Stanger said the screens would still be effective at MOP.

So the Corps plan is to go forward with the screens, but depending on the outcome of the drawdown studies, you may or may not go forward with the surface collector prototype? asked Boyce. We see that decision coming in 1999; we don't believe it would be a prudent expenditure of Federal dollars to head down both paths, Stanger replied. You're talking about a large expenditure to get that surface collector prototype in the water -- \$20 million.

One request, said Hevlin -- I would like to see some initial estimates of FPE -- make some assumptions about what we might get initially through the spillway, and make some assumptions about how many more fish we'll be guiding with the extended screens. Are we going to be able to

get to 80% FPE, in the next couple of years? Yes, in the spring, Ferguson replied. So with spill, 90% FPE would not be unreasonable? asked Hevlin. Correct, was the reply. I'd like to have that illustrated, then, that there's a much higher probability that we can achieve 80% FPE if we go with

the extended screens than if we don't, Hevlin said.

When will the study -- Brege et al 1996 -- be available for peer review? asked Heinith. It's available now, Ferguson replied [this document, titled "Studies to Evaluate the Effectiveness of Extended-Length Screens at John Day Dam, 1996", is Enclosure K, available upon request from Kathy Ceballos of NMFS at 503/230-5420].

Once again, we'd like any comments on this section of the information packet for IT by the end of this week -- March 14, said Ruff. It was so agreed.

Ultimately (after the conclusion of this meeting), Ruff and Hevlin framed this issue for the IT as follows:

[This] issue is in regard to funding in FY'98 the upgrading of the guidance screens in the John Day juvenile bypass system. Recent studies at John Day have shown that the longer bar screens guide a much higher percentage of juvenile salmon and steelhead away from turbine passage than the current shorter traveling screens. The briefing summary places extended screen implementation in the context of the longer-term studies of surface collection and drawdown at John Day.

and

The implementation of extended-length screens at John Day Dam was identified by the System Configuration Team (SCT) on January 14, 1997 as a major issue in the COE's FY'98 budget. During the January SCT meeting, the states, NPPC and NMFS prioritized E-screen implementation at John Day as high in FY'98, contingent on the schedule for study and planning of drawdown, while CRITFC did not support the activity. The Corps' current schedule calls for the implementation of E-screens to begin in 1998 for a cost of \$10,200,000, with costs in 1999 and 2000 of \$9,960,000 and \$3,120,000, for a total project cost of \$23,720,000. The National Marine Fisheries Service FCRPS Biological Opinion RPA#21 requires E-screen implementation at John Day by April 2000, contingent on evaluation of prototype test results and surface collection, and the NPPC plan calls for implementation by March 1998. Another consideration is that with the implementation of E-screens, the John Day project's spring chinook FPE and estimated survivals will meet or exceed the RPA#15 interim performance objectives for bypass improvements.

[Additional information on the schedule, biological benefits, cost, decision points, interim benefits and tradeoffs and other considerations associated with John Day extended-length screen implementation are contained in Enclosure I, available upon request from Kathy Ceballos of NMFS at 503/230-5420]

c) Bonneville PH1 and PH2 DSM, Monitoring and Outfall Relocation, and PH1 FGE.

Hevlin introduced Doug Clarke of COE, who distributed Enclosure L, the Bonneville Fish Mitigation Plan, dated March 6, 1997. Clarke went through this document at some length -- goals, specific PH1 and PH2 improvements, PH1 and PH2 FGE, adult fallback, gas abatement, schedule, and the Bonneville Dam Multi-Year workplan (see Enclosure L for details).

While I appreciate the work the Corps and NMFS have put into developing this packet, it's kind of difficult to work with, in that you have the 80%/95% goals for the project, but you don't have any assessment of the potential of each of these items to get us closer to those goals, Woodin said. We've talked about the difficulties of quantifying those biological benefits at other meetings,

but if no one is willing to stick their neck out and tell us what potential benefits are associated with spending \$45 million on this project, how can we make a decision?

One specific example, on numbered page 4 of Enclosure L, was the statement that completion of the PH2 collection channel modifications, sampling facility and outfall relocation would produce an immediate survival benefit of up to 28% from reduced tailrace and outfall site predation.

What, exactly, does "up to 28%" mean? asked Woodin. That compared to fish passing Bonneville

under current conditions, a fish has a 28% better chance of surviving if it goes through a new bypass system and exits two miles downstream of that project, Hevlin replied. However, we can't

tell you that extended screens will give us X amount of FGE improvement, or that the surface collector will give us X amount of OPE improvement, or that the spillway improvements will give

us X amount better survival. What we're saying is, we're investing in all three things over the next

two years, and will make a decision in 1999 or 2000 about where we can get the most bang for our buck, Hevlin said.

The concern CRITFC has raised is, we're trying to make a decision about whether to spend \$80 million-\$90 million on bypass outfall improvements, said Woodin. If we're only going to get 5% project survival increase, what the tribes are saying is, why not spend \$50 million to put more fish

over the spillway and improve survival by 30%? One problem with the tribes' approach is the fact

that there are some constraints in place, said Bob Willis of COE. You can't get to [80% FPE] with spill at Bonneville. Gas abatement is incredibly expensive at Bonneville; even with gas abatement measures in place, you don't get to a point where you can spill at whatever level you want to at Bonneville. If you have to stay within 120% TDG below that project, using spill as your primary passage route is going to cause problems.

With spill deflectors and a raised tailrace at Bonneville, we would be able to spill somewhere between 120 Kcfs and 150 Kcfs at that project, said Ferguson, and still stay within 120% TDG. That means that any time flows at Bonneville exceed 260 Kcfs, it will be necessary to operate PH2. It's not a situation where, once the spillway is fixed, we can just spill away -- there will be limits, just as there are now.

After some minutes of further discussion, it was agreed that NMFS and COE will develop estimates of the potential fish survival improvements associated with each of the individual items in the Bonneville Fish Mitigation Plan. At one point, we talked about trying to get those estimates for an average spring flow -- say, 300 Kcfs -- and an average summer flow -- say 200 Kcfs, added Ruff. And we need to generate these estimates prior to the April 4 EC meeting, Hevlin said.

In response to a question, Steve Rainey of NMFS said that modeling of the extended-length bar screens at Bonneville has shown a fourfold increase in flow up into the gatewells; improved intercept and lower water velocities through the trash racks -- there is every expectation that, if these extended screens are installed, we will substantially increase FGE at that project.

Conditions look great -- it wouldn't surprise me in the least if we were able to exceed 70%, Rainey said.

Again, we need SCT comments on the Bonneville portion of the IT information packet by the end of this week -- March 14, said Hevlin. As an overall comment, he added, what makes sense to me about this approach is the fact that we would begin construction on the Bonneville PH2 outfall in FY'98; we will also be testing and studying three different ways of getting fish through the project: extended-length bar screens, surface collection and spillway improvements. However, we're not making a decision on any of those alternatives for another couple of years.

One technical question, said Heinith -- has anyone, anywhere in the world, ever sent fish through an outfall pipe two miles long? No, Rainey replied -- the outfalls at some of the Lower Snake projects that are a half-mile long, but that's only a quarter of the length we're talking about at Bonneville. So we're entering uncharted territory here, Heinith said. That's correct, Rainey replied -- we have to.

Ultimately (after the conclusion of this meeting), Ruff and Hevlin framed this issue for the IT as follows:

[This] issue is in regard to funding in FY'98 the Bonneville second powerhouse collection channel improvements, sampling facility and outfall relocation, and the evaluation of extended screens to improve juvenile guidance at powerhouse one. Some time ago, the SCT realized that these FY'98 priority issues at Bonneville could not be adequately addressed without first developing a well-founded multi-year strategy which would provide near-term survival benefits and the evaluation of future passage alternatives as well. The Bonneville Dam Fish Mitigation Plan (Enclosure L) is the result of considerable SCT effort to develop a multi-year strategy. The activities at Bonneville which comprise the FY'98 funding issue are included in the context of this broad multi-year plan.

III. Discussion of CRITFC Feb. 4 Memo -- Proposed Measures for Reprogramming FY'97 COE Budget.

Hevlin distributed Enclosures M -- CRITFC's February 4 memo, "Proposed Measures for Reprogramming of FY'97 COE Construction General Budget," and N -- the Corps of Engineers response to the CRITFC memo. If you look at the lengthy list of recommendations made by CRITFC, and the lengthy list of responses from the Corps, it's obvious that there is a lot of discussion time here, Hevlin said. Shall we attempt to tackle this today, and probably not finish it, or should we schedule another SCT meeting in March, at which we will address each item in detail?

After some minutes of further discussion, it was agreed to convene a supplemental SCT meeting, via conference call, at 1 p.m. Monday, March 17. Anyone who wishes to participate in the resolution of this issue was invited to call in.

IV. Comments on Draft Study Plan for the Turbine Passage Survival Program and on Ice Harbor Turbine Rehabilitation Report.

Comments on the draft Turbine Passage Survival Program study plan are due now;

comments on the Ice Harbor Turbine Rehabilitation Report are due in two weeks, Hevlin said. I thought it might be useful to have a short discussion on these items at today's meeting; anyone who has read these documents and is prepared to comment can do so today, which should save us some time.

Hevlin introduced Ed Meyer, who spent a few minutes discussing NMFS's comments on the Turbine Passage Survival Program project study plan (PSP). We generated about three pages of comments so far, he said. As most of you are aware, this PSP is a three-year program; one of our main comments is a request that the PSP be incorporated into a larger framework, because we're not going to get a true picture of turbine survival in a three-year snapshot. Many of the other comments have to do with the shortcomings of the balloon tag technology that will be used to assess survival, Meyer continued.

Moving on to the Ice Harbor turbine rehab study, Meyer said that one of his concerns is that the rehab process doesn't adequately take into account the environmental benefits of the minimum-gap runners. No matter how much I argue that these units would be a benefit, the cost/benefit analysis will still come out to be a wash, and conventional runners will win out, he said. What I think we'll do is write a letter to both COE districts, emphasizing our preference that we go to minimum-gap runners at Ice Harbor and trying to quantify the biological benefits a little more clearly.

COE's Brayton Willis said the construction schedule for the Ice Harbor rehab project has been moved back a year in order to accommodate the 1999 regional decision -- it's a major investment, and we want to be sure we install the best technology for fish, one meeting participant explained. If anyone feels strongly that minimum-gap runners are the technology that should be installed, please let me know so that I can get those comments into the report, Willis said. The other thing to be aware of is, cost-benefit ratios aside, if the minimum-gap runner test at Bonneville in 1998 produces clear biological benefits for fish, we'll factor those results into the Ice Harbor rehab technology decision, he added.

In response to a request from Hevlin, Ferguson agreed to extend the comment period on the Turbine Passage Survival Program PSP for a few more days.

V. AFEP and FFDRWG Updates.

Anderson said the AFEP Studies Review Work Group met on February 24 and 25 and went through all of the research summaries. Based on the comments there, Walla Walla and Portland Districts are revising those summaries, on an internal basis. A letter will be sent to the region on or about April 1, which will include revised study summaries, and will ask for input from the region during the month of April. The next step after that will be the proposal solicitation process in May. Basically, everything is still on schedule, Anderson said.

John Ferguson briefed the SCT on the results of the most recent FFDRWG meeting, held February 26. No items were elevated to SCT at this meeting. We spent most of the morning session discussing where to go with Bonneville -- PH1 and PH2 surface collection, the 1998 test,

the PH1 FGE program etc, Ferguson said. It seemed to me that people were more aware of, and in agreement with, what we're proposing than they have been at previous meetings. There were a few issues raised, including a desire on NMFS's part to test two units in 1998, rather than one, and to accelerate the entire PH1 FGE program. We'll make a decision on that in March, after we have a chance to look at the model work, Ferguson said.

Other items discussed:

- Gas Abatement. As we mentioned earlier, the gas abatement report will be out in early April; this program is currently carrying a lot of alternatives, and there is a need to reduce the number of alternatives on the table as much as possible. To that end, several gas abatement options are being modeled at WES this week.

- McNary and Bonneville Near-Field Gas Measurements. These measurements, conducted as close as possible to the dams themselves, have now been completed, Ferguson said. The main thing to report is the uniqueness of the Bonneville stilling basin -- there are a lot of holes and irregularities.

- Smolt Monitoring Facilities Updates. Bonneville DSM outfall smolt monitoring 60% plans and specs are now available for comment.

- The Dalles Sluiceway Outfall. This design process is now about 30% complete, Ferguson said; an agency trip to take a look at potential outfall sites is scheduled for early April.

- The Dalles Stilling Basin Repairs. Video inspection of the stilling basin indicates erosion in spill bay 1, with a pretty good hole in the apron. However, looking back at the records from 1966, it looks like this hole has been there since then -- it's not eroding further, in other words. It is not a structural problem, Ferguson said, but there is some concern that it may be a problem for fish, and we're developing a cost estimate to repair that stilling basin.

- The Dalles 64%/30% Spillway Test. Given the magnitude of flows expected in 1997, it does not appear that we will be able to get down to 30% spill soon enough to make this test worthwhile, Ferguson said. The proposal currently on the table is that the hydroacoustic work at The Dalles will be cancelled for 1997 -- we have a pretty good data set already.

- John Day Spillway Weir. We're in position to test the best weir we can test in 1997, said Ferguson.

- John Day Skeleton Bays. The Dissolved Gas Team just completed a trip to WES; as a result of that trip, they're talking about making some design modifications to this structure, to decrease shear zones and injury-causing features in the design itself.

- 1997 John Day Spillway Balloon Tag Test. It was agreed to cancel this test for 1997.

- John Day Flow Deflectors. It now appears that bays 16, 17, 18 and 19 are the ones that will receive deflectors this year. The contractor has requested a daytime spill limit of 25 Kcfs and a nighttime spill limit of 100 Kcfs at that project. If flows come up fast, Ferguson said, there

are going to be some challenges there.

-- John Day Ladder Modifications. Our field unit feels that some of the jumping associated with the north and south ladders at John Day is related to the diffuser; there is a proposal on the table to operate the hydraulic weirs that are in the upstream control section on an in-and-out basis for two months this fall, to see if that reduces jumping in the John Day ladders.

-- Lower Columbia Adult Monitoring Study. Based on discussions at previous SCT meetings, we will be adding monitoring of adults up to the spawning grounds in 1997; we will also be monitoring the tip of Bradford Island in more detail this year, to give us some baseline information, Ferguson said.

-- Behavioral Flume at John Day. This is the subsurface collapsing entrance concept, Ferguson said -- we'll be designing it in 1997 and building it in 1998. We'll be distributing a letter report on this item later this week, Ferguson said.

The next meeting of the Fish Facilities Design Review Work Group will be held Tuesday, April 1 at COE's Portland District headquarters.

VI. Update on Plans for Dworshak.

The only issue here is a proposal, from Utah Power, to put another turbine in at Dworshak, said Hevlin. What they have in mind is a 40 MW unit, which would run at a peak efficiency of 1 Kcfs -- minimum flow from that project. The Corps and Utah Power have scheduled a meeting to discuss this idea, said Anderson, but it's a long way from fruition. I should add that people in Lewiston are quite concerned about the potential negative impacts this additional unit might have on the steelhead fishery below Dworshak, said Steve Pettit of IDFG -- the Governor's office received over 1,000 letters in a 24-hour period after an article on the subject appeared in the Tribune. We'll keep the SCT informed on this issue, said Anderson -- updates as needed at future meetings.

VII. Follow-Up on Proposal for a Drawdown Technical Committee.

Hevlin spent a few minutes outlining the NMFS proposal for a technical committee to oversee what is being done, planned and studied for the two drawdowns. CRITFC has expanded this concept somewhat, to allow for discussion of economics, engineering, biology etc. Sort of a one-stop drawdown shopping approach, in other words, said Anderson.

The SCT agreed that such a drawdown committee would be useful to the region. Anderson suggested that COE Walla Walla organize the group on a roundtable format, so that anyone who wishes to attend and contribute to the discussion can do so. The first drawdown committee meeting was scheduled for Monday morning, April 14.

VIII. Other.

EPA's Mary Lou Soscia raised the idea of a special, EPA-funded scientific workshop on water temperature. After some minutes of discussion, the SCT agreed that such a workshop, covering both short-term and long-term solutions to temperature problems systemwide, would be worthwhile; Soscia said she would organize this workshop, time, date and location t.b.a.

IX. Next Meeting Date and Agenda Items.

It was agreed that, in the future, the SCT will meet on the third Monday of each month. Hence the next meeting of the System Configuration Team was set for Monday, April 21, from 9 a.m. to 4 p.m. in NMFS's Portland offices. The May SCT meeting was set for Monday, May 19; the June SCT meeting was set for Monday, June 16. Meeting notes prepared by Jeff Kuechle, BPA contractor.